NORTH CAROLINA DIVISION OF HIGHWAYS

GEOTECHNICAL UNIT

SOIL AND ROCK CLASSIFICATION, LEGEND, AND ABBREVIATIONS

S	SOIL LEGEND AND AASHTO CLASSIFICATION							CONSISTENCY OR DENSENESS									
GENERAL			MATERIA			SILT-CLAY			T		ERIALS	PRIMARY	COMPACTNESS OR		OF STANDARD		
CLASS.		,	SSING #20			(> 35% PAS		200)	DITORIV	ic man	CIVILLED	SOIL TYPE	CONSISTENCY		tion resistance s per foot)		
GROUP CLASS.	A-1 A-1-a A-1-b	A-3	A-2-4A-2-5	-2	A-2-7	A-4 A-5	A-6	A-7-5	A-1,A-2 A-3	A-4,A-5 A-6,A-7				(DLUW)		(TONS/FT ²)	
SYMB0L	00000000		M2-41-2-	1000	XXX			A-7-5				GENERALLY	VERY LOOSE LOOSE		< 4 4 TO 10		
% PASSING	88888888	::::::		17/2/2	7.7.	7. 20 N			******			GRANULAR MATERIAL	MEDIUM DENSE DENSE		Ø TO 3Ø Ø TO 5Ø	N/A	
#10	50 MX								GRANULAR	SILT- CLAY	MUCK,		VERY DENSE		> 50		
#40 #200	30 MX 50 MX			35 MY	35 MY	36 MN 36 MN	36 MN	36 MN	SOILS	SOILS	PEAT		VERY SOFT		/ 2	/ 25	
(PASSING •40		10 111								<u> </u>		GENERALLY	SOFT MEDIUM STIFF		< 2 2 TO 4	< .25 .25 TO .5	
LL PI	6 MX	N.P.				40 MX 41 MM			SOILS	WITH E OR	HIGHLY	SILT-CLAY MATERIAL	STIFF	,	4 TO 8 8 TO 15 5 TO 30	.5 TO 1 1 TO 2 2 TO 4	
GROUP INDEX		Ø	Ø	4 1		8 MX 12 M		+	MODER	RATE	ORGANIC		VERY STIFF HARD	1	> 30	> 4	
USUAL TYPES STONE FRAGS. FINE STUTY OR CLAYEY STUTY CLAYEY												CPO	LIND	WATER	1		
OF MAJOR GRAVEL & SAND GRAVEL AND SAND SOILS SOILS MATTER MATERIALS SAND											GROUND WATER water level in bore hole [soon after drilling (1.a.d.)] water level in bore hole [soon after drilling (hrs.)]						
• PI OF A-7-5 ≤ (LL-3Ø); PI OF A-7-6 > (LL-3Ø)												STATIC WATER LEVEL (AFTER 24 HRS.)					
	TEXTURE OR GRAIN SIZE																
BOULDER CORRIE GRAVEL COARSE FINE STIT CLAY									PERCHED WATER (PW), SATURATED ZONE, OR WATER BEARING STRATA								
SAND SAND SAND											OW→ SPRING OR SEEPAGE						
GRAIN (MM) 305 75 2 0.25 0.05 0.005 N SIZE (IN) 12" 3"													MISCELLANEOUS SYMBOLS AND ABBREVIATIONS				
SOI	SOIL MOISTURE - CORRELATION OF TERMS												ROADWAY EMBANKMENT WITH SPT TEST BORING SAMPLE DESIGNATIONS				
SOIL MOISTURE SCALE FIELD MOISTURE CHIDE FOR FIELD MOISTURE DESCRIPTION											RIPTION	SUIL DESCRIPTION CANOLS					
(ATTERBI	(ATTERBERG LIMITS) DESCRIPTION GOLDE FOR FIELD MOISTONE DESCRIPTION																
-SATURATED- USUALLY LIQUID; VERY WET, USUALLY										ARTIFICIAL FILL OTHER THAN CORE BORING SS-SPLIT SPUUN SAMPLE SAMPLE ST-SHELBY TUBE SAMPLE SAMPLE SAMPLE SAMPLE							
LL LIQUID LIMIT (SAT.) FROM BELOW THE GROUND WATER TABLE PLASTIC SEMISOLIDA PEQUIPES DRVING TO ATTAIN																	
RANGE {			-WE	T- (W)		SEMISOL	ID; REC	OUIRES	5 DRYIN	NG TO	ATTAIN		LED COIL COOKE.	_	SLOPE INDI		
(PI) PL[(PD PL PLASTIC LIMITOPTIMUM MOISTURE										25° STRIKE AND DIP OF BEDS SLOPE INDICATOR INSTALLATION						
OM OPTIMUM MOISTURE -MOIST- (M) SOLID; AT OR NEAR OPTIMUM MOISTURE											APPARENT DIP — SPT N-COUNT						
SL SHRINKAGE LIMIT												(NORMAL TO)					
	-DRY- (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE											ROD SOUNDING					
			ROCI	Z D	FSI	CRIPTI	ΩN					ABBREVIATIONS					
			11001	<u> </u>		۱۱۱۱۱۱ ا	OIV										
IN THE BROA	DEST MEANING	G, HARD	ROCK IS CO	INSIDER	ED TO	BE THAT IN	DURATED	EARTH	MATERIA	L WHICH	CANNOT	ALLUV.	ALLUVIUM	•		ICACEOUS	
BE SAMPLED BY CONVENTIONAL SOIL SAMPLING TOOLS OR TECHNIQUES. THE BOUNDARY BETWEEN SOIL AND ROCK											AR BLDR.	AUGER REFUS BOULDER			OTTLED O SAMPLE TAKEN		
IS ARBITRAR												BPF	BLOWS PER F			RGANIC TAKEN	
ROCK". FOR	THE PURPOSE	E OF	THIS INVES	TIGATIO	ON, TH	ese materi	ALS AR	E DIVII	DED AS	FOLLOWS	3:	CALC.	CALCAREOUS			OCKET PENETROMETER	
TERM		SYMB	OL C		I		nec	CRIPT	ION			ICL. CLY.	CLAY			EFER TO	
HARD	CORED RO		INFERR	=D	MATE	RIAL THAT				ED BY D	OVED	COB.	COBBLE	1		ESIDUAL OFT	
ROCK N			ROCK L	INE 2	AUGE	RS, EXCEPT	IN THI	N LEDG	ES, AND	REQUIRE	S	CSE.	COARSE			ATURATED	
(HR)				万三"	ROCK	CORING TO	OLS FO	R OBTA	INING A	SAMPLE	Ē	DPT	DYNAMIC PENETRATIO			AND	
	(1))\\\// <i>}</i>		HARD WEATHER		ı	RIAL THAT						EST.	ESTIMATED FINE			ANDY EDIMENT(S)	
WEATHERED ROCK			ROCK (H		DIFFI	CULTY USING	POWER	AUGERS	AND YIE	LDS SPT	REFUSAL	FIAD	FILLED IMMED. AFTER DI			ILT. SILTY	
(WR)		1	SOFT			RIAL THAT						FOSS.	FOSSILIFEROUS			LIGHTLY	
		(Ă)	WEATHE ROCK (S		I	CULTY USIN VALUES > 10						FRAC. FRAG(S).	FRACTURED			TANDARD PENETRATION TEST	
K	21 C 7 7 7 7 1 7 7 7	177			L							GR.	FRAGMENT(S) GRAVEL			OPSOIL ANE SHEAR TEST	
1 SPT RE	FUSAL ≤ 1	INCH	OF PENETR	ATION	PER	50 BLOWS.							SPECIFIC GRA			ERY	
i .	ERRED ROCK											GW	GROUND WATE		W/ W	TTH	
1	RD ROCK SYI RIPTION OF				is cored at	MED.	MEDIUM										
		•			DECOVEDED	BENCH MARK:	BM #15 (HISFI	FD SOL	ARF IN							
LUKE RE	ECOVERY (RE					OF THE COL				- PIAIDE	Ü	BENCH MARK: BM *15 CHISELED SQUARE IN SOUTHEAST CORNER OF SIDEWALK 105.7' RT.					
ROCK QL	JALITY DESIG	GNATI	ON (RQD) - 1	TOTAL	LENGT	H OF SOUN	ROCK	SEGME	NTS REC	OVERED	THAT	OF -BL- STA. II+62.82 ELEV. 3.64'					
ROCK QUALITY DESIGNATION (RQD) - TOTAL LENGTH OF SOUND ROCK SEGMENTS RECOVERED THAT ARE LONGER THAN OR EQUAL TO 4* DIVIDED BY THE TOTAL											STATE PROJECT NO. 8.1080701						
LENGTH OF THE CORE RUN TIMES 100%.											4	3-3349		10. <u>BRS</u> T	P-264(II)		
Will State of the												<u>-</u> _					
is in the second											,						
											SITE DESCRIP				S 264 OVER		
SEAL E												ROSE BAY CREEK					
SEAL SEAL												DDG ITST CT	LOGIST SS			RY RRW	
13 ica di 3 sunt												l		, <u>u</u>	_ SUBMITTED	R1 1/1/44	
1 1 10000000000000000000000000000000000											PERSONNEL						
Representation of the second o											DRP	···	-	3 (200)			
										•	RES		DATE SU	вміттер <u>3/2001</u>			
`			•	Signo	ature	, `	0					-	WNC			REV. 8/11/98	
L												<u> </u>					